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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,653	02/19/2002	Ikuhito Onodera	111984	2584

25944 7590 11/23/2005

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EXAMINER	
MAGEE, CHRISTOPHER R	
ART UNIT	**PAPER NUMBER**
2653	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,653	ONODERA, IKUHITO	
	Examiner	Art Unit	
	Christopher R. Magee	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/14/2005 has been entered.

Response to Amendment

2. The reply filed 11/21/2005 was applied to the following effect: All relevant objections are withdrawn as being satisfied.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanuki (US 6,195,871 B1) in view of Kato et al. (hereinafter Kato) (US 6,747,846).

- Regarding claims 1 and 10, Watanuki discloses a wafer structure comprising:

thin film magnetic head assembly [12] [Figs. 1 and 2], which is fabricated on a given substrate [25],

an electrical circuit [14] including a circuit leading wire [32] so as to monitor the processing degree of said thin film magnetic head assembly, which is fabricated on said substrate,

a protective layer [36] so as to cover said thin film magnetic head assembly [12] and said electrical circuit [14],

a bump [41] so as to penetrate said protective layer and thus, to be exposed, which is fabricated on said substrate, and

an element leading wire [42] to be electrically connected to said thin film magnetic head element to be connected to an external circuit, which is fabricated on said substrate,

said element leading wire [42] being electrically connected with said circuit leading wire [32] [col. 4, lines 35-39],

said bump [41] is shared with said thin film magnetic head assembly and said electrical circuit [col. 4, lines 29-34].

Watanuki does not teach the element leading wire being in direct contact with the substrate.

Kato discloses an inside metal layer [116g] (i.e., element leading wire) that is electrically conductive contact with substrate [101g] and electrically conductive contact with the lower magnetic pole [110], which is part of the thin film magnetic head assembly [col. 9, lines 11-14; Fig. 7].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to furnish the wafer structure of Watanuki with the element leading wire in direct contact with the substrate as taught by Kato.

The rationale is as follows: One of ordinary skill in the art at the time of the invention would have been motivated to furnish the wafer structure of Watanuki with the element leading wire in direct contact with the substrate as taught by Kato in order to provide a higher equilibrium electrode potential in an aqueous solution than that of the magnetic thin film, thus retarding corrosion of the magnetic thin film during lapping procedures [Kato; col. 2, lines 51-67].

- Regarding claims 2 and 11, Watanuki shows a conductive film [52] to electrically connect said element-leading wire [42] and said circuit-leading wire [32].
- Regarding claims 3 and 12, Watanuki discloses the conductive film [52] is made by a sputtering method or a plating method [col. 4, lines 41-43]..
- Regarding claims 4 and 13, Watanuki discloses the element-leading wire [42], said circuit-leading wire [32] and said conductive film [52] are made of the same conductive material [col. 4, lines 39-44].
- Regarding claims 5 and 14, Watanuki shows a bonding pad [20b]on the protective layer [36] so as to be electrically connected with said bump [Fig. 2].
- Regarding claims 6 and 15, Watanuki shows the bonding pad [22b] is elongated, on said protective layer, to the area of said electrical circuit [Fig 1].
- Regarding claims 7 and 16, Watanuki shows the bonding pad [20b] is narrowed (i.e., connection section 51) in the area between said thin film magnetic head assembly [12] and said electrical circuit [14].
- Regarding claims 8 and 17, Watanuki teaches the electrical circuit [14] is constructed of an electrical lap-guiding element [col. 1, lines 42-43].

- Regarding claims 9 and 18, Watanuki teaches the thin film magnetic head assembly [12] includes a reading head element, and the polishing degree of said reading head element is monitored by said electrical lap-guiding element [col. 2, lines 49-61].

Response to Arguments

4. Applicant's arguments filed 11/14/2005 have been fully considered but they are not persuasive.

Applicant states on page 8 :

> *"The Office Action admits that Watanuki does not teach or suggest this feature but alleges that Kato does. Citing col. 9, lines 1 1-14 and Fig. 7 of Kato, the Office Action alleges that an inside metal layer 116g of Kato contacts with substrate 101g.*
>
> *However, as described at, col. 9, lines 14-18 of Kato, the inside metal layer 116g is covered with an internal metal insulating film 121, whereby electrical contact with reproducing magnetic element is prevented. That is, the inside metal layer 116g is insulated from the MR element by the internal metal insulating film 121. In other words, the inside metal layer 116g of Kato does not function for conducting the thin film magnetic head performance such as writing and reading performance. Therefore, even combined, Watanuki and Kato do not teach or suggest the element leading wire as recited in claim 1. As such, claim 1 is patentably distinct from the applied art."*

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The Examiner maintains that Kato '846 discloses an inside metal layer [116g] (i.e., element leading wire) that is electrically conductive contact with substrate [101g] and electrically conductive contact with the lower magnetic pole [110], which is part of the thin film magnetic head assembly [col. 9, lines 11-14; Fig. 7].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to furnish the wafer structure of Watanuki with the element leading wire in direct contact with the substrate as taught by Kato.

The rationale is as follows: One of ordinary skill in the art at the time of the invention would have been motivated to furnish the wafer structure of Watanuki with the element leading wire in direct contact with the substrate as taught by Kato in order to provide a higher equilibrium electrode potential in an aqueous solution than that of the magnetic thin film, thus retarding corrosion of the magnetic thin film during lapping procedures [Kato; col. 2, lines 51-67].

Therefore, the rejection of claims 1 and 10, along with the respective dependent claims is upheld.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (571) 272-7592. The examiner can normally be reached on M-F, 8: 00 am-5: 30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher R. Mages
Patent Examiner
Art Unit 2653

November 21, 2005
crm

GEORGE J. LETSCHER
PRIMARY EXAMINER